

## Developing a Conceptual Understanding of Fractions: Grades 3-5

**October 26-27, 2016 and February 8, 2017**

**GRREC Office & Training Center • 230 Technology Way • Bowling Green, KY 42101**

The topic of fractions has long been a challenging one for children (Hiebert, 1985; Newton, 2008; Wu, 2010). The extent to which students master **fractions is a strong predictor of later mathematical success, particularly in algebra**, which serves as a “gatekeeper” for access to higher education (U.S. Department of Education, 1997). Conceptual understanding of fractions is essential for students to learn about the topic, to remember what they learned, and to apply this knowledge to solve problems involving fractions (National Center for Education Statistics, 2010). So, what is a teacher to do?

Join GRREC Mathematics Instructional Specialists, Rebecca Gaddie and Randi Womack for three days of professional learning on how to provide this deep conceptual understanding that can serve as the pathway for students to be college and career ready. Participants will be actively engaged while expanding their personal “toolkits” of depth of understanding, ideas, and instructional strategies.

### Participants will:

- Discover how to teach for deeper conceptual understanding of mathematical content
- Explore a progression of fractional thinking as developed in the Kentucky Academic Standards
- Learn strategies to increase student participation and discourse through intentional planning
- Experience rich tasks in a learner-centered environment
- Focus on the process of mathematical thinking, reasoning and problem solving to illustrate accurate and efficient ways to solve fraction computation problems

### PGES Connections

#### Domain 1: Planning & Preparation

- *Component 1a: Demonstrating Knowledge of Content & Pedagogy*
- *Component 1c: Selecting Instructional Outcomes*
- *Component 1e: Designing Coherent Instruction*

#### Domain 2: Classroom Environment

- *Component 2b: Establishing a Culture for Learning*

#### Domain 3: Instruction

- *Component 3b: Using Questioning and Discussion Techniques*
- *Component 3c: Engaging Students in Learning*

#### Domain 4: Professional Responsibilities

- *Component 4a: Reflecting on Teaching*
- *Component 4e: Growing and Developing Professionally*

**For:** Mathematics Teachers Grades 3-5, Instructional Coaches, Curriculum Specialists, Instructional Assistants, Special Education Teachers and Directors of Special Education

**Dates:** October 26, 27, 2016 and February 8, 2017

**Time:** 8:30 – 3:30 CT Registration and breakfast will begin at 8:00

**Cost:** **Option 1: \$500 per person** – Three days of professional learning focused on mathematics content and pedagogy including personal set of resource books and manipulatives.

**Option 2: \$250 per person** – Three days of professional learning focused on mathematics content and pedagogy (does not include books and manipulatives to keep).

**Space is limited.**

**Deadline to register: Monday, Oct. 24, 2016**

**EILA will be provided**

## Registration Form

### *Developing a Conceptual Understanding of Fractions: Grades 3-5*

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*Please Print:*

Name: \_\_\_\_\_ District: \_\_\_\_\_

School: \_\_\_\_\_ Position: \_\_\_\_\_

Phone #: \_\_\_\_\_ Work Email: \_\_\_\_\_

**Select One Professional Learning Option: (Use links for online registration or fax completed registration form)**

Option 1: Three days of professional learning plus resource books and manipulatives - Cost: \$500 - P.O. # \_\_\_\_\_

[Click Here to Register Online for PD with Materials](#)

Option 2: Three days of professional learning – Cost: \$250 – P.O. # \_\_\_\_\_

[Click Here to Register Online for PD Only](#)

(P. O. # required for registration)

Note: School districts (or schools) will be billed following the activity based upon registration. Please cancel your registration within three (3) working days of the activity to avoid being billed for the fee and to allow another participant the opportunity to attend. Substitutions will be allowed.

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## Registration Deadline: October 24, 2016

Sponsored by  
Green River Regional Education Cooperative  
230 Technology Way, Bowling Green, KY 42101  
Phone: (270) 563-2113 **FAX: (270) 563-2208**  
[www.grrec.ky.gov](http://www.grrec.ky.gov)

**Questions?**

Contact Kim Estes at (270) 563-2113 or e-mail [kim.estes@grrec.org](mailto:kim.estes@grrec.org)